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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,664	09/05/2006	Kenichi Fukuoka	295981US2PCT	3129
22850 7590 02/19/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER LEE, BRENNITRA M	
			ART UNIT 4176	PAPER NUMBER
			NOTIFICATION DATE 02/19/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/591,664	<b>Applicant(s)</b> FUKUOKA ET AL.	
	<b>Examiner</b> BRENITRA M. LEE	<b>Art Unit</b> 4176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>27 November 2006; 07 August 2008</u> .                        | 6) <input type="checkbox"/> Other: _____                          |



### **DETAILED ACTION**

This Office Action is in response to the applicant's communication filed on 5 September 2006. In virtue of this communication, claims 1-13 are currently presented in the instant application.

#### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

2. The information disclosure statement(s) (IDS) submitted on 10 January 2008 and 26 November 2008 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

#### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "display" as recited in claims 12 and 13 along with the "color conversion member" and the "color filter" of claims 12 and 13, respectively, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not

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be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a) because reference character “5” and “4” of Fig. 1 is not in the specification. The specification reference the corresponding parts of the drawing with reference numbers “3” and “1”, respectively. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining

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figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification Objections***

5. The disclosure is objected to because of the following informalities:

Page 16, line 30, "5" should be changed to "--4--";

Page 17, line 2, "4" should be changed to "--5--";

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Xu et al. (U.S. Patent 6,133,692).

With respect to claims 1-3, Xu et al. discloses in Figs. 1 and 2 An organic electroluminescent device (10) comprising: a light reflecting layer (15), a light semi-transmitting layer (21) and a light interference part (12) including an organic emitting layer (16), the part being formed between the light reflecting layer and the light semi-transmitting layer; the spectrum of reflected light emitted from the light semi-transmitting layer having at least three minimum values in the wavelength region of 400 to 800 nm when light having a wavelength of 400 to 800 nm enters from the light semi-transmitting layer (Col. 3, lines 25-33).

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Wherein at least one of the light reflecting layer and the light semi-transmitting layer is a drive electrode and the light reflecting layer is a reflective electrode (Col. 3, lines 46-49).

With respect to claim 4, Xu et al. discloses the organic electroluminescent device according to claim 1, wherein the light interference part (12) comprises at least one of, a first inorganic compound layer between the light reflecting layer and the organic emitting layer and, a second inorganic compound layer (18) between the organic emitting layer and the light semi-transmitting layer (Col. 2, lines 50-55).

With respect to claim 5, Xu et al. discloses an organic electroluminescent device according to claim 4, wherein at least one of the first and second inorganic compound layers is a transparent electrode (Col. 2, lines 50-55).

With respect to claim 6, Xu et al. discloses an organic electroluminescent device according to claim 1, wherein the light semi-transmitting layer is provided with a light diffusion part (Col. 3, lines 34-44).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that

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the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burroughes et al (UK Patent Application GB 2349979 A), in view of Xu et al. (U.S. Patent 6133692 A).

With respect to claim 7, Burroughes et al. discloses in Fig. 2 an organic electroluminescent device comprising: a first light semi-transmitting layer (17), a second light semi-transmitting layer (12) and a light interference part (19) including an organic emitting layer (14) (Page 6, lines 22-27 thru Page 7, lines 1-2), the part being formed between the first light semi-transmitting layer and the second light semi-transmitting layer (Page 2, lines 15-22). Burroughes et al. does not disclose the spectrum of transmitted light emitted from the first light semi-transmitting layer having at least three maximum values in the wavelength region of 400 to 800 nm when light having a wavelength of 400 to 800 nm enters from the second light semi-transmitting layer.

Xu et al. discloses in Fig. 2 the spectrum of transmitted light emitted from the first light semi-transmitting layer having at least three maximum values in the wavelength region of 400 to 800 nm when light having a wavelength of 400 to



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800 nm enters from 20 the second light semi-transmitting layer (Col. 3, lines 25-33). Therefore to form an organic electroluminescent device of Burroughes et al. that emits light corresponding to the teachings of Xu et al. to obtain white light would have been deemed obvious of one of ordinary skill in the art.

With respect to claim 8, the combination of Burroughes et al. and Xu et al. discloses all the claimed limitation as expressly recited in claim 7, however, Xu et al. does not disclose a semi-transmitting layer being a drive electrode.

Burroughes et al. discloses at least one of the first light semi-transmitting layer (17) and the second light semi-transmitting layer (12) is a drive electrode (Page 7, lines 18-26). Therefore to form an organic electroluminescent device that incorporates a semi-transmitting layer being a drive electrode of Burroughes et al. and emits light corresponding to teachings of Xu et al. to obtain white light would have been deemed obvious of one of ordinary skill in the art.

With respect to claim 9, the combination of Burroughes et al. and Xu et al. discloses all the claimed limitation as expressly recited in claim 7, however Xu et al. does not disclose the structure of the interference part. Burroughes et al. discloses in Fig. 2 a light interference part (19) comprises at least one of, a first inorganic compound layer (16) (Page 7, lines 11-13) between the first light semi-transmitting layer (17) and the organic emitting layer (14) and, a second inorganic compound layer between the organic emitting layer (14) and the second light semi-transmitting layer (12). Therefore to form an organic electroluminescent device that arranges the inorganic compound layer between the first light semi-transmitting layer and the organic emitting layer of Burroughes

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et al. and emits light corresponding to teachings of Xu et al. to obtain white light would have been deemed obvious of one of ordinary skill in the art.

With respect to claim 10, the combination of Burroughes et al. and Xu et al. discloses all the claimed limitation as expressly recited in claim 9. However, Xu et al. does not disclose the transparency of the inorganic layer. Burroughes et al. discloses at least one of the first and second inorganic compound layers is a transparent electrode (Page 7, lines 11-17). Therefore to form an organic electroluminescent device in which the inorganic compound layer is a transparent electrode, as taught by Burroughes et al., and emits light corresponding to the teachings of Xu et al. to obtain white light would have been deemed obvious of one of ordinary skill in the art.

With respect to claim 11, the combination of Burroughes et al. and Xu et al. discloses all the claimed limitation as expressly recited in claim 7, however, Burroughes et al. does not disclose a light diffusion part. Xu et al. discloses at least one of the first and second light semi-transmitting layers (21) is provided with a light diffusion part (13) (Col. 3, lines 34-44). Therefore, to form an organic electroluminescent device of Burroughes et al. that incorporates a light diffusion part taught by Xu et al. for color purity and intensity would have been deemed obvious of one of ordinary skill in the art.

10. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu et al. (U.S. Patent 6133692 A) in view of Kimura (U.S. Patent Application Publication 2006/0124920 A1).

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With respect to claim 12 and 13, Xu et al discloses all the claim limitations as expressly recited in claim 1, except a display using a color conversion member or color filter. Kimura discloses in Fig. 3 a display comprising a color conversion member and/or color filter (Para. 0041, lines 1-10). Therefore, to form a display comprising of a color filter and or color conversion member (311, 312, 313) as taught by Kimura and incorporating the organic electroluminescent device of Xu et al. would have been deemed obvious of one of ordinary skill in the art.

### ***Citation of Relevant Prior Art***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iwakuma et al. (U.S. Patent Application Publication 2008/0246391 A1) discloses an organic electroluminescent device including at least an anode, a first emitting layer, a hole barrier layer, a second emitting layer and a cathode.

Ito et al. (U.S. Patent Application Publication 2007/0194701 A1) discloses an organic EL device which can easily control colors to obtain white light emission and has a high efficiency.

Kuma (U.S. Patent Application Publication 2006/0220538 A1) discloses an organic EL device and a display with excellent view angle properties and high efficiency.

### ***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENNITRA M. LEE whose telephone number

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is (571)270-7552. The examiner can normally be reached on Monday-Friday (Alt. Friday off) 7:30 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thuy V. Tran can be reached on 571-272-1828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRENITRA M. LEE/  
Examiner, Art Unit 4176

/Thuy Vinh Tran/  
Supervisory Patent Examiner, Art Unit 4176  
02/13/2009